

**IN THE SPECIFICATION:**

The specification as amended below with replacement paragraphs shows added text with underlining and deleted text with ~~strike through~~.

Please REPLACE paragraphs [0034], [0038] and [0039] with the following paragraphs:

**[0034]** The tracks are formed on the header area 2 as they are in the user data area. Thus, the geometry of the optical recording medium according to the present invention is more uniform than that of a conventional optical recording medium having a header area on which pre-pits are recorded. The amount of a laser beam reflected becomes more uniform in recording data on an optical disk having a dual-layered structure as well as on that having a single-layered structure. Thus, header information can be reproduced using less power than is required to reproduce the header information recorded by ~~pre-pits.~~ pre-pits.

**[0038]** ~~FIG. 6 is a reference diagram~~ FIGS. 6A and 6B are reference diagrams explaining a header signal generated by the multi-modulator 41 of the header signal recording apparatus according to an embodiment of the present invention. Referring to FIG. 6A, if header information contains binary data, for example, "010101000011011101010100," and it is divided into three parts to provide first, second, and third header information, the first header information is frequency-modulated, the second header information is phase-modulated, and the third header information is amplitude-modulated. The frequency of a carrier signal used in the frequency modulation, phase modulation, or amplitude modulation is determined as a multiple of the frequency of a single frequency wobble signal, thereby making extraction of an auxiliary clock signal in the header area 2 (see FIG. 2) efficient. ~~The upper portion of FIG. 6A is an~~ illustration of a header signal having the first through third header information modulated according to the above described types of modulation. Here, A denotes a header flag region. The header flag region A serves as a flag indicative of the beginning or end of the header area 2. To this end, a dc signal is recorded on the header flag region A, or alternatively, the header flag region A is formed as a mirror region in which no signal is recorded. If the dc signal is recorded, the amplitude of a channel 2 signal detected from the header flag region A is zero. If a laser diode partitioned into four sections A, B, C, and D is used to detect signals, channel 2 and channel 1 signals are  $(A+B)-(C+D)$  and  $(A+B)+(C+D)$ , respectively. The wobble signal and the header signal are detected as the channel 2 signal.

[0039] ~~The lower portion of FIG. 6B~~ is an illustration of a header signal obtained as a result of simulation using a wavelength of 400 nm, a numerical aperture (NA) of 0.85, a wobble signal period of 32 channel bits, a wobble signal amplitude of  $\pm 10\text{nm}$ , and track pitch of  $0.32\text{ }\mu\text{m}$ . In this way, the header signal according to the present invention has the duplicate or triplicate header information at the same region, thereby allowing for a double or triple recording density.